CHAPTER – II

REVIEW OF LITERATURE

2.1 INTRODUCTION

The present research explores the academic achievement and self-concept which have reviewed in the previous studies. The studies and reviews related with the academic achievement and self-concept are given under following sub-headings:

2.2. Studies on Academic Achievement;

2.3. Studies on Self-Concept;

2.4. Studies on Relationship between Academic Achievement and Self-Concept; and

2.5. Conclusion.

2.2. STUDIES ON ACADEMIC ACHIEVEMENT

Muhammad et al. (2005) focused on achievement level of primary grade students in different subjects taught at primary level and the factors affecting the student achievement in this regard. The study was carried out on a sample of 1,080 students of grade 3 and 5 drawn from randomly selected 36 primary/elementary schools from nine districts of the Punjab province. The instruments were: the achievement tests in three subjects mathematics, Urdu (national language) and life skills (Islamyat, social
studies and science); and questionnaires for teachers and students to know various possible factors affecting achievement. Results show that the achievement was the lowest in the subject of Urdu (mean 15.2) and the highest in life skills (mean 29.9) in grade 3. While in grade 5, it was the lowest in mathematics (mean 10.8) and the highest in life skills (31.63). Overall the performance of the female students was relatively better than their male partners. Location-wise, the rural students performed better than the urban students. District-wise, the performance of students of Rajanpur and Rahim Yar Khan districts was relatively better than the students of district Kasur and Bahawalpur. Among the factors affecting students achievement were parental education, their occupation and guidance, teacher guidance, social status, transport facility, self study, book reading and homework – all have a positive or negative correlation with students’ achievement.

Page and Wayne (2007) aimed to demonstrate a general construct of schools called academic optimism and to show it was related to student achievement in urban elementary schools, even controlling for socioeconomic factors, and school size. Data were collected from 99 urban elementary schools in Texas and multiple regression and factor analyses were used to test a series of hypotheses guiding the inquiry. The major hypotheses of the study were supported; academic optimism was a second-order construct comprised of collective efficacy, faculty trust, and academic
optimism. Moreover, academic optimism is a school characteristic that predicts student achievement even controlling for socioeconomic status.

Stewart (2008) examined the extent to which individual-level and school structural variables are predictors of academic achievement among a sample of 10th grade students abstracted from the National Educational Longitudinal Study database. A secondary analysis of the data produced the following findings. The study results show that individual-level predictors, such as student effort, parent-child discussion, and associations with positive peers, play a substantial role in increasing students' achievement. Furthermore, the results also suggest that school climate--in particular, the sense of school cohesion felt by students, teachers, and administrators--is important to successful student outcomes. In total, school structural characteristics were found to have relatively small effects on student achievement when compared with individual-level characteristics.

Engin-Demir and Cennet (2009) estimated the individual and combined effects of selected family, student and school characteristics on the academic achievement of poor, urban primary-school students in the Turkish context. Participants of the study consisted of 719 sixth, seventh, and eighth grade primary-school students from 23 schools in inner and outer city squatter settlements. The findings indicated that the set of variables comprising student characteristics, including well-being at school, scholastic
activities and support, explained the largest amount of variance in academic achievement among the urban poor. Although the effect sizes are small, family background characteristics and school quality indicators were also found to be significantly related to academic achievement.

According to McConney and Perry (2010) shown that both student and school socioeconomic status (SES) are strongly associated with student outcomes, but less is known about how these relationships may vary for different students, schools and nations. In this study they use a large international dataset to examine how student SES, school SES and self-efficacy are associated with mathematics performance among 15-year-old students in Australia. They found that increases in school SES are consistently associated with substantial increases in achievement in mathematics and this phenomenon holds for all groups, regardless of their individual SES. Furthermore, the findings show that the association of school SES with maths achievement persists even when subject-specific self-efficacy is taken into account. However, the findings also suggest modest differences among student groups disaggregated by these factors. In particular, the association between maths achievement and school SES appears moderately stronger for students with higher levels of self-efficacy compared with their peers with lower self-efficacy. Furthermore, among students with similar levels of self-efficacy, the association between maths achievement and school SES tends to be stronger for lower SES students.
than for their more privileged peers. From these findings, we highlight the importance of the Australian case for comparable systems of education, and provide a discussion of policy implications and strategies for mitigating the influence of school socioeconomic composition on academic achievement more generally.

Burney (2010) aimed to identify school- and district-level variables that relate to advanced academic achievement, as defined by the ratio of number of scores of 3, 4, or 5 on Advanced Placement exams to school enrollment. The study initially included 46 variables for 339 public high schools in one Midwestern state. Hierarchical linear regressions were applied to 14 and then 7 independent variables, explaining 80% of the variance in advanced academic achievement among high schools. Findings indicate that after accounting for seemingly fixed factors, schools and districts can still contribute significantly in the development of advanced academic achievement.

Garrett et al. (2010) expressed on dispel the myth that Latino urban high-school students are not capable of performing at high academic levels. Whereas much educational research emphasizes the academic underachievement of urban Latino students, the study counteracts this research by describing the four success factors that three working-class Puerto Rican male high-school students attribute to their high academic
achievement. These success factors are: (a) the acquisition of social capital through religiosity and participation in school and community-based extracurricular activities, (b) having a strong Puerto Rican identity, (c) the influence of these students' mothers/sisters on their academic achievement, and (d) the potential for caring and sincere teachers and other school staff to influence high academic achievement.

Muola (2010) investigated the relationship between academic achievement motivation and home environment among standard eight pupils. The study was carried out on 235 standard eight Kenyan pupils from six urban and rural primary schools randomly selected from Machakos district. Their age ranged between 13 and 17 years. Two questionnaires, the simple profile (SP) and home environment questionnaire, were used to provide information on the pupil's levels of academic motivation and home environment. A significant (p less than 0.05) positive relationship was found between six of the home environmental factors, that is fathers' occupation (r = 0.22), mothers' occupation (r = 0.26), fathers' education (r = 0.15), mothers' education (r = 0.14), family size (r = 0.26) and learning facilities at home (r = 0.23) and academic achievement motivation. Parental encouragement was the only factor that was not significantly (r = 0.03) related to academic achievement motivation. Although these correlations are low, they showed that pupils' motivation to do well in academic work is to some extend dependent on the nature of their home environment. It was
recommended that parents need to be aware of the importance of their role in their children's academic achievement motivation so that they can provide the necessary facilities at home.

Dotterer et al. (2011) reported that classroom context and school engagement are significant predictors of academic achievement. These factors are especially important for academically at-risk students. Grounded in an ecological systems perspective, this study examined links between classroom context, school engagement, and academic achievement among early adolescents. They have taken a multidimensional approach to the measurement of classroom context and school engagement, incorporating both observational and self-reported assessments of various dimensions of classroom context (instruction quality, social/emotional climate, and student-teacher relationship) and school engagement (psychological and behavioral engagement). Using data from the NICHD Study of Early Child Care and Youth Development, they tested whether school engagement mediated the link between classroom context and academic achievement among 5th grade students, and whether these pathways were the same for students with previous achievement difficulties identified in 3rd grade. Participants included 1,014 children (50% female) in 5th grade (mean age = 11). The majority of the participants were white (77%) and 23% were children of color. Results indicated that psychological and behavioral engagement mediated the link between classroom context and academic
achievement for students without previous achievement difficulties. However, for students with previous achievement difficulties psychological and behavioral engagement did not mediate the link between classroom context and academic achievement. These results suggest that improving classroom quality may not be sufficient to improve student engagement and achievement for students with previous achievement difficulties. Additional strategies may be needed for these students.

Ejakait et al. (2011) contributed new evidence on factors associated with low achievement among pupils in urban informal neighborhoods in Nairobi, Kenya. The authors used three different data sets to examine the effect of residence in particular neighborhoods, pupil gender, primary school type, and household socioeconomic status on pupil achievement in the Kenya Certificate of Primary Education (KCPE) examination results for 2005 and 2006. Results suggest that residence in Nairobi's informal neighborhoods of Korogocho and Viwandani, enrollment in a public school, and one's gender, if female, are the strongest explanatory variables for low achievement.

Rust et al. (2011) in their study biculturalism was examined as a factor that may positively affect the academic achievement of African American high school students, beyond cultural identity and self-esteem. Hierarchical regression analyses determined that cultural identity and
academic self-esteem were important factors for academic achievement, but not biculturalism.

Sylvia and Elisabeth (2011) described senior lecturers' experiences of and reflections on the influence of gender on their work and career possibilities. Eight informants, four female and four male university teachers, representing different schools at a Swedish university college were interviewed. A qualitative content method was used for analysis. The findings revealed that the lecturers at the university college had an experience of academic gender neutrality. The findings also pointed to experiences of gendered practice that had been internalized and made normal. It also revealed that the lecturers did not consider or reflect on the gap between experiences of and reflections on gender neutrality and gendered practice. The findings imply that although the Swedish model of equality work has been successful in many ways, a confrontation on the micro-political level is required to achieve a gender equality workplace environment and to increase women's career possibilities.

You et al. (2011) discussed on the longitudinal effects of perceived control on subsequent academic achievement as well as an indirect effect, which is mediated by high school student's academic engagement behaviors for all 4 ethnic groups; (c) regarding social contextual factors, students' perception of teacher and parental support had a positive effect on perceived
control, which ultimately impacted the academic achievement of high school students across all 4 ethnic groups.

Cokley et al. (2012) examined academic disidentification along with demographic and psychological factors related to the academic achievement of African American adolescents. Participants included 96 African American students (41 males, 55 females) in an urban high school setting located in the Southwest. Consistent with previous research, academic disidentification was determined by looking for an attenuation of the correlation between academic self-concept and grade point average (GPA) of male and female students. The relationship between academic self-concept and grade point average significantly decreased for African American males, while it significantly increased for African American females. Demographic factors included age and sex, while psychological factors included academic self-concept, devaluing academic success, and racial identity. Results of a hierarchical regression indicated that sex and academic self-concept were significant positive predictors of GPA, while age and racial identity were significant negative predictors, accounting for 50% variance. Academic self-concept was the strongest predictor of GPA.

Huang (2012) examined the discriminant and criterion-related validity of achievement goals in predicting academic achievement. Analysis of 151 studies yielded 172 independent samples (N = 52,986) with
correlations among achievement goals and between achievement goals and academic achievement. The discriminant validity of achievement goals in the 2-, 3-, and 4-factor achievement models was sound, as the correlations among achievement goals ranged from 0.00 to 0.38. Approach motivations were associated with higher academic achievement, and avoidance motivations were associated with lower academic achievement. The criterion-related validity of each achievement goal \((r = -0.13\) to 0.13) and the validities for the 2-, 3-, and 4-factor models were low. Integrating the findings regarding the discriminant and criterion-related validity revealed the 4-factor model as the best choice to facilitate the understanding of learning outcomes.

Ishak et al. (2012) explored that parenting styles have always been a crucial factor in influencing all aspects of a person's development. The purpose of this study was to test the structural equation model of academic achievement among the students using parenting styles as a moderator. The sample comprised 493 students from eight schools. Parenting styles are determined using the Parental Authority Questionnaire (Buri in J Pers Assess 57:110-119, 1991). Academic achievement is measured based on the students' performance in the Lower Secondary Assessment. Data were analyzed using structural equation modelling. Results demonstrated that model of authoritative and model of authoritarian fit the data of this study well. Both authoritative and authoritarian parenting styles are the most
common practice of the parents. Parenting styles have been found to be a moderator of this study. The results indicated that parenting styles moderated the effect of academic self-concept on academic achievement. The impact of academic self-concept on academic achievement is found to be greater for the authoritative than the authoritarian parenting style.

Raymona and Roxanne (2012) explored the relationship between academic optimism (AO) and elementary reading achievement (RA). Using correlation and hierarchical linear regression, the authors examined school-level effects of AO on fifth grade reading achievement in 29 elementary schools in Alabama. Correlational analysis revealed that AO was positively correlated with RA ($r=0.78$, $p<0.01$), as were all the components of AO, namely: collective efficacy ($r=0.70$, $p<0.01$); faculty trust in students and parents ($r=0.83$, $p<0.01$); and academic emphasis ($r=0.58$, $p<0.01$). Percent free and reduced lunch, which was a proxy for socio-economic status (SES), was negatively correlated with all the variables in the study. Hierarchical linear regression revealed that academic optimism had a significant effect on RA ($b=0.52$, $p<0.01$) and accounted for approximately 18 per cent of the variance in reading achievement above the effects of SES.

Saadia (2012) demonstrated rural-urban gaps in achievement and schooling conditions. Evidence from developing countries is still sparse. This study seemed to report rural-urban disparities in achievement, student,
teacher, and school characteristics based on a nationally representative sample of grade four students from four provinces of Pakistan. The study aimed to take into account the limitations of previous research, mainly the issues of non-representative samples and inadequate sampling techniques, by using proportionally adequate sample to address the potential differences in achievement of rural and urban students and how schooling, students and teacher-related factors account for gap in achievement. The primary data source for the study was the 2006 national assessment survey of year four students in government school across four provinces in four core subjects. The sample design included a two-stage stratified random sample, where the major strata of national interest were student and school gender, geographical location and region. First stage involved selecting schools and in the second stage students were selected from schools. The procedure of estimation involved computing the average of each group's achievement scores and attached standard errors, the gap of standard errors and statistical significance of standard errors at 0.05 level. The results show that rural and urban students had comparable levels of achievement in some of the tested learning areas. In Balochistan province, rural students outperformed their urban counterparts in three out of the four tested subjects. In Punjab and Sindh, urban students performed significantly better in social studies and language tests; scores on social studies and language did not differ significantly across location in the North West. The differences appeared to
be partly explained by variation in schooling conditions, students' home background, and teachers' characteristics. Teachers' training turned out to be decisive in determining students' achievement, whereas availability of resources and multi-grade teaching was less important.

Aturupane et al. (2013) opined that one of the eight Millennium Development Goals is that all children in developing countries should complete primary education. Much progress has been made toward this goal, but completing primary school does not ensure that students attain basic literacy and numeracy skills. Indeed, there is ample evidence that many children in developing countries are not learning these basic skills. This raises the question: What can schools and communities do to increase the learning that takes place in schools? Sri Lanka exemplifies these issues. It has achieved universal primary completion, but many Sri Lankan primary school students perform poorly on academic tests. This study used unusually rich data from Sri Lanka to investigate the determinants of academic performance, as measured by achievement tests, of Grade 4 students. At the child and household level, educated parents, better nutrition, high daily attendance, enrollment in private tutoring classes, exercise books, electric lighting, and children's books at home all appear to increase learning, while hearing problems have a strong negative effect. Among school variables, principals' and teachers' years of experience, collaborating with other
schools in a "school family," and meetings between parents and teachers all appear to have positive impacts on students' scores.

Hart et al. (2013) discussed that achievement goal theory helps describe how and why students engage in various academic behaviors. Historically, achievement goals have been examined almost exclusively with undergraduate, nonminority samples, and predominately with factor analytic techniques. The present study adds to a growing literature by providing initial validation of a leading achievement goal measure, the Achievement Goal Questionnaire-Revised (AGQ-R; Elliot and Murayama, 2008), among rural ("N" = 186) and urban ("N" = 197) African American high school students. Collectively, results from both confirmatory factor and Rasch analyses highlight issues that should be considered when using the AGQ-R among African American high school students.

Levpuscek et al. (2013) examined individual factors and social factors that influence adolescent students' achievement in mathematics. The predictive model suggested direct positive effects of student intelligence, self-rated openness and parental education on achievement in mathematics, whereas direct effects of extraversion on measures of achievement were negative. Indirect positive effects of intelligence, self-rated conscientiousness, student-perceived mathematics teacher's press for understanding and mastery goal, and a negative effect of student-rated
parental academic pressure on course achievement were mediated through the students' self-efficacy in mathematics. The findings highlight the important role that individual differences in ability and personality, as well as student perceptions of parent and teacher academically related variables, play in the students' performance in mathematics.

Megan et al. (2013) aimed to add to the literature on Academic Optimism, a composite measure composed of teacher perceptions of trust in students, academic press, and collective efficacy by exploring a similar set of constructs from the student perceptive. The relationships between student trust in teachers, student perceptions of academic press, and student identification with school were examined as well as how they were individually and collectively related to student achievement in the schools in an urban school district. This study assessed the perceptions of students in 49 elementary, middle, and high schools in one urban district. The measures used included the Student Trust in Teachers Survey (Adams and Forsyth), the Identification with School Questionnaire (Voelkl), and an adaptation of Academic Press (Hoy, Hannum and Tschannen-Moran). Confirmatory factor analysis was employed to explore whether these three observed variables would form a latent variable called Student Academic Optimism. Finally, the relationship of Academic Optimism to student achievement, controlling for SES, was examined using SEM. Strong and significant relationships were found between all three of the observed variables. A CFA analysis
confirmed that they formed a latent variable the authors called Student Academic Optimism. Student Academic Optimism had a significant direct effect on student achievement ($b=0.73$, $p<0.01$) while SES (percent of students eligible for the free and reduced lunch program) had a significant negative effect on student achievement ($b=-0.37$, $p<0.01$). Together student academic optimism and SES explained 67 percent of the variance in student achievement with student academic optimism making the largest contribution to the explanation.

Page and Sean (2013) examined the relative impact of achievement press on student success in elementary schools in the Southwestern USA. Data from individual teacher assessments and student achievement tests are collected and aggregated at the campus level. Hierarchical linear modeling is utilized to calculate the Intra Class Correlation (ICC), then campus level scores for achievement press (along with control variables) are regressed on school success indicators in order to determine the relative impact of achievement press on various levels of school attainment. The results of these analyses demonstrate that achievement press made a statistically significant independent contribution to school success, both near term (one year) and longitudinally (over three years).

Wolters et al. (2013) designed to forge stronger theoretical and empirical links between achievement goal theory and attribution theory in
their study. High school students ("N" = 224) completed a self-report survey that assessed 3 types of achievement goals, 7 types of attributions, and self-efficacy. Results indicated that students' adoption of achievement goals explained 4 types of attributions, but no single type of achievement goal stood out as the most consistent or strongest predictor for those attributions. Results also showed that a focus on mastery and certain types of attributions, but not either form of performance goals was associated with a more adaptive pattern of behavioral and cognitive engagement. Overall, the present study provides a valuable contribution by promoting integration among prominent models of achievement motivation, and by extending what is known about the relations between each of these models and students' academic functioning.

Løhre et al. (2014) presented in their study that although welfare in childhood and adolescence is of great public concern, individual or other resources have not been extensively studied in relation to wellbeing in schools. In this longitudinal study, factors that may promote girls' or boys' school wellbeing as well as factors that may have an adverse effect were assessed. Altogether, 149 boys and 119 girls in public primary and secondary schools completed questionnaires twice, two years apart (T1 and T2). The impact of potentially promoting and potentially adverse factors at T1 were investigated in relation to school wellbeing at T2 using logistic regression. No gender differences were revealed in self-rated school
wellbeing whereas factors associated with school wellbeing showed substantial gender differences. Boys who experienced necessary academic help from teachers were 2-3 times more likely to report good school wellbeing compared to other boys. For girls, perceived loneliness at school demonstrated a strong and negative association with school wellbeing both in crude and multivariable analyses. The study concludes that there may be gender differences in predictors of students' school wellbeing that health-promoting strategies need to take into account. Academic support from teachers, an example of resources in close surroundings, appears to be of great importance for boys. Among girls, perceived loneliness may indicate reduced school wellbeing.

Wang et al. (2014) studied parental involvement in education remains important for facilitating positive youth development. The study conceptualized parental involvement as a multidimensional construct--including school-based involvement, home-based involvement, and academic socialization--and examined the effects of different types of parental involvement in 10th grade on student achievement and depression in 11th grade (approximately ages 15-17 years). In addition, this study tested whether parental involvement influenced adolescent outcomes by increasing their academic engagement in school. A total of 1,056 adolescents participated in the study (51% males; 53% European American, 40% African American, and 7% other). Parental involvement was found to
improve academic and emotional functioning among adolescents. In addition, parental involvement predicted adolescent academic success and mental health both directly and indirectly through behavioral and emotional engagement.

2.3. STUDIES ON SELF-CONCEPT

Ireson and Hallam (2009) studied the effects of ability grouping in schools on students' self-concept were examined in a sample of 23 secondary schools with a range of structured ability groupings. Measures of general self-concept, academic self-concept, and achievement were collected from over 1600 students aged 14-15 years and again two years later. Students' academic self-concept, but not their general self-concept, was related to the extent of ability grouping in the school attended. Subject-specific facets of academic self-concept were not related to the number of years of ability grouping students had experienced in English, mathematics and science; however, they were related to students' position in the grouping hierarchy, with students in high-ability groups having significantly higher self-concepts in all three subjects than students in low-ability groups. Students' intentions to learn in future were more strongly affected by self-concept than by achievement.

Sullivan (2009) assessed gender differences in academic self-concept for a cohort of children born in 1958 (the National Child Development
Study). It addresses the question of whether attending single-sex or co-educational schools affected students' perceptions of their own academic abilities (academic self-concept). Academic self-concept was found to be highly gendered, even controlling for prior test scores. Boys had higher self-concepts in mathematics and science, and girls in English. Single-sex schooling reduced the gender gap in self-concept, while selective schooling was linked to lower academic self-concept overall.

McInerney et al. (2012) examined the prediction of academic self-concept (English and Mathematics) and learning strategies (deep and surface), and their direction of effect, on academic achievement (English and Mathematics) of 8,354 students from 16 secondary schools in Hong Kong. Two competing models were tested to ascertain the direction of effect: Model A posited the effect of academic self-concept on learning strategies, whereas Model B posited the effect of learning strategies on academic self-concept. Structural equation modeling indicated that the data fit both models adequately, although Model B was found to have more applied heuristic value for practitioners than Model A because intervention is easier for learning strategies than self-concept. Further investigation also supported the reciprocal relationship between academic self-concept and academic achievement. The findings suggest that academic self-concept, learning strategies, and academic achievement have reciprocal relationships with each other.
DeFreitas et al. (2013) examined whether verbal and math self-concepts could help explain the academic performance of first generation college students. Participants were 167 ethnically diverse students at an inner city, commuter, open-enrollment, four-year university in the southwestern United States. Results indicated that students with lower verbal and math self-concepts had lower grade point averages. Furthermore, there were ethnic differences among first generation college students in grade point average with Whites performing better than African Americans and Latinos. In addition, Asians and Latinos had higher math self concept than African Americans.

Rubie and Lee (2013) expressed that many studies examine student self-concept during compulsory schooling but few have explored the self-concept of students in higher educational settings. The current study examined self-concept by faculty and gender among higher education students in New Zealand. Participants were 929 undergraduate students from a large New Zealand university. The results showed some differences in verbal and maths self-concept by faculty. Generally, students in faculties teaching subjects more reliant on maths skills had higher maths self-concept than those in faculties where facility in verbal skills was important. The opposite results were found for verbal self-concept. No overall gender differences were found for general, academic, verbal and maths self-concept although a statistically significant difference was found for problem-solving
self-concept. This finding suggests students' choice of faculty may be based on perceptions of their skills and capabilities in the various fields, irrespective of gender.

Calero et al. (2014) have examined how Hispanic students' academic self-concept influences the independent variables of family academic expectations, peer relationships, schoolwork, and student-teacher relationships. A survey was administered to 222 ninth-grade students in Long Island, New York, 99 of whom self-identified as Hispanic. A structural equation model analyzed the influence of the independent variables on the dependent variable, academic self-concept. A multiple regression analysis indicated that peer relationships, family academic expectations, and schoolwork were significant predictors of students' academic self-concept. Peer relationships was a modifying variable on students' academic self-concept.

King et al. (2014) examined changes in students' English and math self-concepts and to investigate the effects of gender and school ability level on these changes. Self-concept in English and math were measured thrice across three years among a sample of 2618 secondary school students from Hong Kong. Gender and school ability level were included as time-invariant predictors. Results indicated that students' English self-concept slightly increased across time, while math self-concept marginally declined. Gender
influenced both the initial levels and rates of change for English and math self-concepts, while school ability level predicted initial levels of self-concept.

Seaton et al. (2014) suggested that motivated students and those with high academic self-concepts perform better academically. Although substantial evidence supports a reciprocal relation between academic self-concept and achievement, there is less evidence supporting a similar relation between achievement goal orientations and achievement. There is also a paucity of research testing the longitudinal relations between achievement goal orientations and academic self-concept with achievement. The present investigation aimed to contribute to addressing these limitations. The sample consisted of 2786 Australian high school students (ages 11-17) measured at four time waves six months apart. Separate models indicated reciprocal relations between mathematics self-concept and achievement and mathematics performance approach goal orientation and achievement. There was little evidence of reciprocal relations between a mastery approach goal orientation and achievement. Juxtaposing the variables, when all were included in a single model, only self-concept had significant reciprocal relationships with achievement.

Wilson et al. (2014) expressed that Academic self-concept predicts students' future goals and is affected by a student's relative success
compared with his or her peer group. This exploratory study used structural equation modeling to examine the contributions of the perceived level of difficulty of the curriculum, in addition to the contributions of social comparison and achievement in schoolwork, to academic self-concept among students enrolled in advanced coursework. Along with school achievement, perceived difficulty and social comparison also predicted academic self-concept. The final model indicated that students differentiate between learner self-concept, which is how students perceived their ability to understand new ideas or knowledge, and student self-concept, which is how they perceived their abilities to succeed in school-related tasks. Of these two constructs, student self-concept was a better predictor of future goals; however, the overall effect was small.

2.4. STUDIES ON RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND SELF-CONCEPT

Marsh and Koller (2004) combined the reciprocal-effects model and the internal/external frame-of-reference model into a unified model of relationships between academic self-concept and achievement. However, this model has only been examined with German adolescents. The researchers decided to test this model with two-wave data drawn from a national survey of Taiwanese students. They found that reciprocal effects exist for both math and Chinese for the high-school students. However, the
causal relationship of academic self-concepts and achievement for pre-adolescents seems to vary depending on school subject. Moreover, the causal effects from academic achievement decline with age, whereas those from academic self-concepts increase with age, suggesting a developmental trend. The negative cross-domain effect from prior achievement to subsequent academic self-concept is not strong in the unified model.

Kim (2005) studied the effects of a constructivist approach on academic achievement, self-concept and learning strategies, and student preference were investigated. The 76 six graders were divided into two groups. The experimental group was taught using the constructivist approach while the control group was taught using the traditional approach. A total of 40 hours over nine weeks was used to implement the experiment. The instruments used were as follows; mathematics tests administered by the teacher, self-concept inventory, learning strategies inventory, and a classroom environment survey. The results are 1) constructivist teaching is more effective than traditional teaching in terms of academic achievement; 2) constructivist teaching is not effective in relation to self-concept and learning strategy, but had some effect upon motivation, anxiety towards learning and self-monitoring; 3) a constructivist environment was preferred to a traditional classroom.
Lalley and Miller (2006) studied to examine and compare the effectiveness of pre-teaching and re-teaching on math achievement and academic self-concept of third grade students identified as low achievers. A pretest-posttest experimental design was used to conduct the study. Results indicated that both pre-teaching and re-teaching resulted in significant increases Math Concepts, Math Problems, and Math Computation. Although both were found to produce significant gains in overall math achievement, comparative analyses indicated no differences between the groups. In the area of academic self-concept, a significant within-subjects increase was found for the pre-teaching group only. Despite the significant increase in math related self-concept for the pre-teaching group, no significant between-group differences were found.

Rinn (2007) examined the academic achievement, academic self-concepts, and aspirations of gifted college students who are enrolled in an honors program and of gifted college students who are not enrolled in an honors program. Participants include 294 gifted college students, 248 of whom were enrolled in an honors program and 46 who were not enrolled in an honors program. A series of analyses of covariance is used to compare the mean grade point averages, academic self-concepts, and educational aspirations of the two groups. Academic self-concept is measured using the Academic subscale of the Self Description Questionnaire III. Results indicate the gifted/honors students have higher academic achievement and
higher academic self-concepts than the gifted/ nonhonors students, even when controlling for SAT score. No significant differences are found with regard to aspirations.

Areepattamannil (2008) examined the self-reported academic achievement, academic self-concept, and academic motivation of 573 immigrant and nonimmigrant adolescents in the Greater Toronto Area (GTA) secondary schools. Descriptive discriminant analyses indicated that the immigrant adolescents had higher performance in mathematics, higher math and school self-concepts, and higher intrinsic and extrinsic motivation than their nonimmigrant counterparts. Multiple regression analyses showed that verbal self-concept and school self-concept were the best predictors of English GPAs for both immigrant and nonimmigrant adolescents. Although math self-concept was the sole predictor of math GPAs for immigrant and nonimmigrant adolescents, school self-concept was the sole predictor of overall GPAs for nonimmigrant adolescents. The best predictors of overall GPAs for immigrant adolescents were math and school self-concepts and extrinsic motivation-external regulation.

Wang et al. (2008) explored the paradoxical findings about students' mathematics self-concept and academic achievement shown in international and comparative studies prompt this exploration of the function and development of mathematics self-concept. That is, when examining data
within individual countries, a positive relationship exists between students' self-concept and achievement in mathematics while a negative relationship emerges in cross-country comparisons. This challenges the popular and commonly held assumption among North American teachers who generally believe that self-concept predicts student achievement and thus, the improvement of students' self-concept in mathematics leads to higher mathematics achievement. Using comparative studies of Chinese and US student mathematics learning, this study further analyses the inadequacy of existing theories and then seeks to explain the relationship between self-concept and achievement in mathematics using an alternative interpretation.

Moller et al. (2009) undertaken a meta-analysis of 69 data sets (N = 125,308) was carried out on studies that simultaneously evaluate the effects of math and verbal achievements on math and verbal self-concepts. As predicted by the internal/external frame of reference (I/E) model, math and verbal achievements were highly correlated overall (0.67), but the correlation between math and verbal self-concepts (0.10) was close to zero. Correlations between math and verbal achievement and correlations between achievements and self-concepts within the domains were more positive when grades instead of standardized test results were used as achievement indicators. A path analysis revealed support for the I/E model, with positive paths from achievement to the corresponding self-concepts (0.61 for math, 0.49 for verbal) and negative paths from achievement in one subject to self-
concept in the other subject (0.21 from math achievement on verbal self-concept, 0.27 from verbal achievement to math self-concept). Furthermore, results showed that the I/E model is valid for different age groups, gender groups, and countries. The I/E model did not fit the data when self-efficacy measures were used instead of self-concept measures. These results demonstrate the broad scope of the I/E model as an adequate description of students' self-evaluation processes as they are influenced by internal and external frames of reference.

Wilson and Clancie Mavello (2009) suggested that low socioeconomic status is a major factor in diminishing academic achievement of African American urban youth; however, there are other factors influencing students' achievement. To examine the other factors that contribute to academic achievement, the study investigated a sample of 60 low-resource middle school parents and students (41 boys and 19 girls). Several questions addressed the relationship of socioeconomic status to achievement, academic support, social support, and mother's well-being. Additionally, the relation among mother's well-being, students' perceived monitoring by their parents, and negative learning attitudes were examined, as well as the relationship among social support and parents' well being and academic achievement, negative learning attitudes and achievement.
Pinxten et al. (2010) discussed about the relation between academic self-concept and achievement has been examined in a large number of studies. The majority of these studies have found evidence for a reciprocal effects model. However, there is an ongoing debate on how students' achievement should be measured and whether the type of achievement indicator (grades, tests, teacher ratings) affects the causal pattern found in these studies. The study aimed at clarifying how the types of achievement measures and the way they are modelled can affect the results of causal ordering studies. In that sense, the study has propose to yield recommendations for researchers in this domain and also provide some direction for practitioners seeking ways to enhance their students' achievement and/or academic self-concept. Repeated measures of academic self-concept and achievement (standardized tests and teacher ratings) were examined in a sample of 1,753 students in Grades 7, 8, 10, and 12. Structural equation modelling was used. Several models (with different types and numbers of achievement measures) were compared. Only small differences were found between models using one or two indicators of achievement. All models generally supported the reciprocal effects model. However, the final model, wherein tests and teacher ratings were used as separate latent variables, showed different developmental patterns in the causal relation between academic self-concept and achievement. The study has concluded that researchers should interpret the results of causal ordering studies
discerningly because the type of measure chosen as an indicator of achievement might affect the causal pattern between academic self-concept and achievement.

Ahmad et al. (2011) done a quantitative research using correlational method. The purpose of this research is to study the relationship between self-concept and ability to handle stress on academic achievement of student leaders in University Putra Malaysia. The sample size consists of 106 respondents who are the Student Supreme Council and Student Representative Committee. Tennessee Self Concept Scale (TSCS) was used to evaluate respondents' self concept and for respondents' responses strategy the Response Strategy Questionnaire were used. The respondents' CGPA is used to evaluate their academic achievements. The findings illustrate that there is no significant relationship between self concept and academic achievement. Correlation between self concept and academic achievement is not significant (r = 0.06, p = 0.950). Meanwhile there is a significant relationship between respondents’ response strategies and academic achievements chi-square (10, N = 106) = 19.721, p = 0.032. This would mean that the respondent's response strategy is influenced by his or her academic achievement. The value of frequency contingency, 0.396 illustrate that the relationship is positive and low.
Huang (2011) examined the relation between self-concept and academic achievement in 39 independent and longitudinal samples through the integration of meta-analysis and path analysis procedures. For relations with more than 3 independent samples, the mean observed correlations ranged from 0.20 to 0.27 between prior self-concept and subsequent academic achievement and from 0.19 to 0.25 between prior academic achievement and subsequent self-concept. The finding shows that specificity of self-concept was the only significant moderating factor in the relation between (a) prior self-concept and subsequent academic achievement and (b) prior academic achievement and subsequent self-concept.

Moller et al. (2011) studied about the reciprocal internal/external frame of reference model (RI/EM) combines the internal/external frame of reference model and the reciprocal effects model. The RI/EM predicts positive effects of mathematics and verbal achievement and academic self-concepts (ASC) on subsequent mathematics and verbal achievements and ASCs within domains and negative effects of mathematics and verbal achievements and ASCs on subsequent achievements and ASCs across domains. Although ample support was provided for the I/E model by cross-sectional data and for the REM within a single domain, there has been almost no research on the longitudinal generalizability of the reciprocal cross-domain effects. Using three waves of data collection from Grade 5 to Grade 8 with N = 1,508 students, analyses supported the validity of the
RI/EM, revealing positive longitudinal effects of grades and ASCs on subsequent grades and ASCs within domains and negative effects of grades on subsequent ASCs across domains.

Chen et al. (2012) studied about the Marsh's internal/external (I/E) frame of reference model which depicts the relationship between achievement and self-concept in specific academic domains. Few efforts have been made to examine concurrent relationships among cognitive ability, achievement, and academic self-concept (ASC) within an I/E model framework. They simultaneously examined the influences of domain-specific cognitive ability and grades on domain self-concept in an extended I/E model, including the indirect effect of domain-specific cognitive ability on domain self-concept via grades. Tenth grade respondents (628 male, 452 female) to a national adolescent survey conducted in Taiwan. Respondents completed surveys designed to measure maths and verbal aptitudes. Data on Maths and Chinese class grades and self-concepts were also collected. Findings of the study is that statistically significant and positive path coefficients were found between cognitive ability and self-concept in the same domain (direct effect) and between these two constructs via grades (indirect effect). The cross-domain effects of either ability or grades on ASC were negatively significant. The study concludes that Taiwanese 10th graders tend to evaluate their ASCs based on a mix of ability and achievement, with achievement as a mediator exceeding ability as a
predictor. In addition, the cross-domain effects suggest that Taiwanese students are likely to view Maths and verbal abilities and achievements as distinctly different.

Parker et al. (2012) in their study, developed and tested a differential effects model of university entry versus major selection using a set of common predictors, including background factors (gender and socioeconomic status), academic achievement, and academic self-concept. The research used data from 2 large longitudinal databases from Germany (N = 5,048) and England (N = 15,995) to explore the generalizability of the hypothesized model in 2 cultural contexts. For both countries, the results suggested that (a) socioeconomic status was a key predictor of university entry, whereas gender was a key predictor of major selection; (b) achievement and self-concept in both math and English were positive predictors of university entry; and (c) math achievement and self-concept predicted math-intensive major choice and lower likelihood of entering verbal-intensive majors (and vice versa).

Al-Srour et al. (2013) explored the level of self-concept among primary school students according to gender and academic achievement variables in Amman. A random sample was chosen from fourth, fifth and sixth grades in private schools in Amman city. The sample of the study consisted of (365) male and female students, (177) males and (188) females.
To investigate the level of self-concept among the sample participants an Arabic version of self-concept questionnaire was administrated after investigating reliability and validity for the self-concept questionnaire. The findings of the study showed that had a high level of self-concept in general. However, the level of self-concept differs according to gender and academic achievement variables as the means of males was higher than the means of females on the total score and on each scale of peers' relations. Moreover, there is a significant statistical differences at the level of ($p = 0.05$) in the level of self-concept among students due to differences in achievement as the differences were for the favor of high achievers who score more than 95% in the present study, followed by the students who achieved 85%-94% then those who achieved 85% and those who refused to tell their averages.

Chen et al. (2013) combined the reciprocal-effects model and the internal/external frame-of-reference model into a unified model of relationships between academic self-concept and achievement. However, this model has only been examined with German adolescents. They decided to test this model with two-wave data drawn from a national survey of Taiwanese students. They found that reciprocal effects exist for both math and Chinese for the high-school students. However, the causal relationship of academic self-concepts and achievement for pre-adolescents seems to vary depending on school subject. Moreover, the causal effects from academic achievement decline with age, whereas those from academic self-
concepts increase with age, suggesting a developmental trend. The negative cross-domain effect from prior achievement to subsequent academic self-concept is not strong in the unified model.

2.5. CONCLUSION

Thus the review of studies related to the area of investigation enabled the investigator to plan the course of action and in the formulation of suitable hypotheses for the study. The description of the tool, the sample and the statistical techniques used in this study are given in the next chapter.